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THE ONLINE LEARNING HIVE: TRANSFER TO PRACTICE WITHIN A MOOC COMMUNITY OF EDUCATORS

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Abstract

We describe the analysis of online engagement by participants in a MOOC on teaching with tablets and mobile devices. The MOOC was aimed at educators, prompting them to use tablets in novel and innovative ways in their own educational practice. The MOOC included instructor-led and student-led activities and had a substantial social and constructivist component. We analysed the online discussions (across several platforms) and identified clear and frequent examples of participants providing evidence of their own practice, and many examples of peer-to-peer learning. While the MOOC was designed to facilitate the transfer of novel teaching approaches to the participants' practice, there were fewer examples of this happening. A surprising finding was the degree to which peer support encouraged participants to engage more fully in the MOOC.

Introduction

How can we encourage educators to take what they learn online and embed it meaningfully into their classroom practice? This paper examines the nature of the interactions within a community of practice associated with an online hybrid MOOC, "Teaching with Tablets," to see whether the learning environment facilitates a more effective transfer of skills to practice.

Our key questions were:

- Does participation in a hybrid MOOC prepare educators for using tablets more effectively in their classrooms?
- Is the hybrid MOOC format effective in influencing the teaching practices and pedagogical beliefs of those involved?

MOOCs (Massive Online Open Courses) can be characterised in many ways (Smith, Caldwell, & Richards, 2016), including the degree to which a MOOC is didactic (xMOOC) with learners traversing a pre-defined learning path, or connectivist (cMOOC) with learners co-constructing their own content around themes (Pomerol, Epelboin, & Thoury, 2015). Hybrid MOOCs, such as Teaching with Tablets, combine features of both (Chauhan, 2014).

Teaching with Tablets MOOC

The aim of the Teaching with Tablets (TwT) MOOC was to prepare educators across sectors to use mobile devices effectively in their own institutions. We adopted a hybrid approach in this MOOC. It incorporated xMOOC elements, such as a structured programme of browsing and e-tivities (Salmon, 2013)

presented in a Blackboard virtual learning environment. Some material was hosted in Blackboard while other resources were included as hyperlinks. The e-tivities prompted and required discussion in a variety of social media platforms, such as Google+ and Twitter (Table 1). The heterogeneous presentation of interactions and material posed a challenge in how their impact on practice could be analysed.

Content in the MOOC was drawn from the book *Teaching with Tablets* (Caldwell & Bird, 2015) and e-tivities were based on six themes; Exploring Apps, Manipulating Media, Visible Learning, Technology Outdoors, Digital Storytelling, and Talk and Collaboration. A choice of e-tivities was offered for each theme in order to appeal to a range of sectors. The benefits of e-tivities in scaffolding online learning and promoting learner engagement are well documented by Salmon (2013). The TwT e-tivities were designed to promote exploration of ideas in practice within educators' various settings and encouraged participants to discuss their experiences in a learning community, where the MOOC moderated, participating as equal members. The combination of active, constructive learning through e-tivities and participation in the discussion has been shown to be key to successful course outcomes (Palloff & Pratt 2007; Salmon 2013).

In addition, the hybrid MOOC included synchronous interaction via Google hangouts and Twitter chats (Figure 1). From Lave and Wenger (1991) onwards, socialisation among members has been emphasised as an important and defining factor in the procedure of building a Community of Practice (CoP).

Numerous commentators have stressed the importance of face-to-face communication in a virtual CoP, even in the modern distributed environment with a wide range of communications media (Hildreth, Kimble, & Wright, 2000; Johnson, 2001; Kimble, Hildreth, & Wright, 2001).

We hypothesised that these interaction methods would facilitate transfer of ideas to educational practice.

Table 1.

Features of the Hybrid MOOC Design

	Platforms			
	Blackboard Open Education	Google + community	Twitter	Google Hangouts
Affordances	Access to course content	Posting text, video and image-based content	Synchronous timed twitter chats	Synchronous face-to-face chats
	e-tivities	Asynchronous commenting on posts	Asynchronous commenting	
	Announcements			

Methods

The TwT MOOC had 570 students registered, of which 294 accessed the course website and 171 accessed some learning material. The Google+ Community had 273 members. The engagement by week shows a reasonably typical drop-off in participation, though 29% of active learners engaged in the fifth week of content (Smith et al., 2016). The Google+ community was international: the Zeemap of Google+ participants had 103 pins from 28 different countries. We had 85 responses to a poll that indicated a spread across Primary (38%), Secondary (25%) and Higher Education (22%).

Early engagement in the MOOC was prompted by two general e-tivities, which were not part of the main themes and e-tivities. Participants were asked to introduce themselves and then use the Exploring Apps page on the Google+ community to suggest Apps that they currently used. Palloff and Pratt (2007) suggest using these icebreaker methods is a good way to develop and sustain a sense of community. This demonstrated the emergence of the community as initially the moderators strongly welcomed everybody, setting the friendly and welcoming tone that was maintained throughout the MOOC.

Evaluating Interaction in the MOOC

Samples of the Google+ posts were taken for analysis; every third post made by participants was taken from all categories. The Storify of each Twitter chat for each week and other data from video, multi-modal reflections (such as Thinglink) and Google Hangouts was also analysed.

We started analysis with selective coding (Strauss & Corbin, 1998) to identify interaction related to the research questions, augmented by open and axial coding to identify and record other types of interaction. Interactions via any media were tagged with the same set of codes. For example, the code 'Participant Reflection' could be applied to posts or comments on the Google+ community, tweets within the Twitter chat, questionnaire responses or in final evaluations.

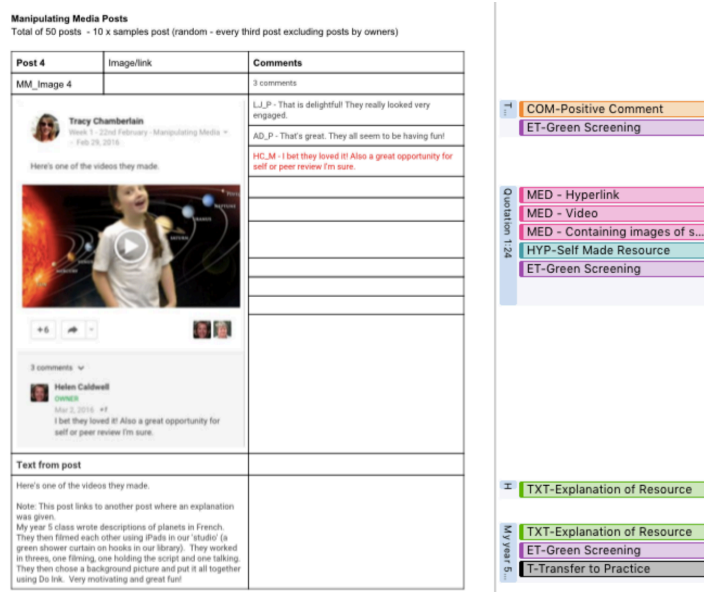


Figure 1. Example of coded data.

generated a real learning community and enabled additional peer-peer and instructor-participant learning. Evidence gathered indicated evidence of practice, often from before the MOOC, peer-to-peer learning, and some evidence of transfer to practice.

Evidence of Practice

The main source of evidence of practice came from the participants directly posting the evidence, either as a text description of an instance of practice, or the posting of an artefact (picture, photo, or video) that resulted from the practice. This evidence of practice was a simple and direct transfer of knowledge from the participant to the community.

Examples

TC: My Year 5 class wrote descriptions of planets in French. They then filmed each other using iPads in our studio (a green shower curtain on hooks in the library). They then chose a background picture and put it all together using Do Ink. Very motivating and great fun!

AM: Some greenscreening for report writing in English. The children loved working in groups to utilise their written reports in a context...children have subsequently created their own greenscreen work as part of their independent home learning.

Manipulating Media Posts

Total of 50 posts - 10 x samples post (random - every third post excluding posts by owners)

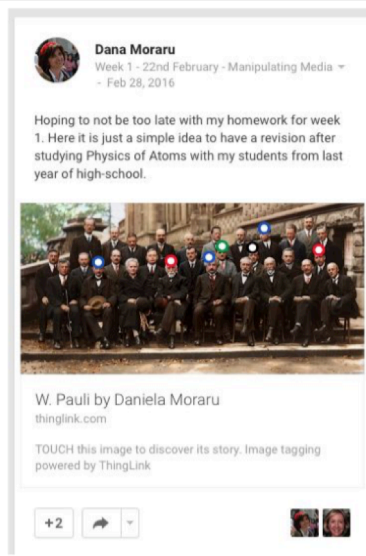
Post 6	Image/link	Comments
MM_Image 6		8 comments
		<p>LJ_P - That's an amazing image. How did you /will you share it with learners?</p> <p>MJ_P - The great thinkers on who's shoulders we all stand</p> <p>DM_P - To Liz Jones - I could use it at starter for an open lesson. Each student can bring his/her own contribution to appreciate the importance of each scientist in science evolution till these days. To Merlin Jones - Yes, this is my opinion too.</p> <p>LJ_P - +Dana Moraru sounds really interesting. I bet they could share further knowledge on the people and maybe give you links to add to the Thinglink.</p> <p>DM_P - I trust them that they'll do like this. They are clever and creative students.</p> <p>LJ_P - +Dana Moraru sounds even better then. Sounds exciting.</p> <p>HC_M - I like the idea that you could give students a line up and they could research and add links during the lesson starter. Or do this in advance. Has anyone tried this with a group login to Thinglink?</p> <p>DM_P - Thank you, Helen. I discovered the group on Thinglink recently and after the discussions above this idea came to me also. And I like it. For this lesson I have to wait till next year, but is no time to wait for another lesson.</p>
Text from post		
<p>Hoping to not be too late with my homework for week 1. Here it is just a simple idea to have a revision after studying Physics of Atoms with my students from last year of high-school.</p>		

Figure 3: A ThingLink image prompting reflective questioning and intent to transfer to practice.

Learning from each other (peer to peer learning) comes across strongly throughout the data collected. This is demonstrated within the comments of posts on the Google+ community and within the micro-conversations within

the Twitter chats. Examples of ‘conversations’ in the twitter chats are given where someone asks for some ideas on how to use Green Screening with Early Years and another conversation about how to use help those being filmed interact with the video being ‘placed’ behind them. These sit outside the direct questions which framed the format of the chat but demonstrate participants using the expertise of others on the course to further their own knowledge.

Many elements seen in the comments in the Google+ posts added to these examples of evidence for example there were questions, answers, reflections, encouragement by both participants and moderators. The community appeared to grow through these interactions. Where there were clear roles at the beginning (participants and moderators) these appeared to blur as the course continued. Moderators learned from participants and vice versa. Participants took on the role as the expert, sharing, answering questions of other participants.

Example

It has been brilliant to connect with people who are in the same interest of doing something with apps at the same time because of the hardest things when you are isolated in your organisation and in your own job trying to find other people doing the same thing at the same time who have time to do it then. I have lots of enthusiastic colleagues but if you say 'Can we chat about this?' or 'Would you like to share that?' it is often governed by whether they are available...we have all made ourselves available and there has been so much collaboration because of that and I've found it really powerful.

Transfer to Practice

In the MOOC communities, there were few clearly identified instances of transfer from the MOOC to novel practice in the participants' own educational contexts. (There were many examples of participants stating they were intending to transfer ideas from the MOOC to their practice. We surmise this is due to the time frame between new e-tivities and themes and teachers' already busy lives.) There were more examples of concrete transfer in the retrospective videoconference we carried at the end of the MOOC.

In all cases, the journey into practice was not as straightforward as we expected. Participants did not take the suggested sample activities presented in the e-tivities and other MOOC material and directly transfer it. Instead, they seemed to reflect on the provided material and discuss it in the various communities, where they engaged in peer-to-peer learning about the uses and possible impact of the new practices. When participants did successfully transfer content from the MOOC to their practice, they did so after this interaction and a subsequent period of self-reflection. Only then did they apply the new practice to their context, following it up with a reflective post on the activity in the MOOC community.

Evidence of learning and some classroom practice was therefore found through comments made on others' posts, peer to peer learning in the form of comments over time in the Google+ Community or mini-dialogues between smaller groups of individuals in the Twitter chats (figure 4).

A - I like the idea of the shower curtain. Are there any images? Thanks for sharing.

B - Yes! I think I even have an idea green shower curtain in the loft! Great idea. It's a bit shiny though - is yours and if so does the light reflect too much? Thank you for reminding me :-)

C - I got mine from Argos. It's slightly shiny, a bit like dull satin. One of my groups I had problems with the chroma effect, that may have been why. Now that I've tested the process, I'm going to investigate some other fabric to use, I'd like a slightly darker shade and not shiny. If you've got one already, it's certainly worth a try.

D [owner]- Perhaps using clothes pegs on the sides of the curtain might help keep it smooth. That might help reduce the number of reflections.

B - +C Thanks, I'm thrilled as I just got permission to buy a proper green screen thing & my HT thinks she has a spare tripod for the iPad at home. Just need to work out the sound and we're off! Thank you everyone for motivation x

A - +B I got some great iPad tripods from a UK company called Hills. They were really reasonably priced and extremely worth having.

B - Thanks for the tip!

E [OWNER] - Love the idea of the shower curtain! We've used material, a painted wall, a PowerPoint slide and a pop up screen. All have been equally magical, as is yours!

Figure 4. Example discussion from Google+ on green screen e-tivity.

Example

We bought a green screen (as a result of being on the MOOC) before I was totally confused as to what it would might be useful for. It seemed obvious about filming but it didn't really seem obvious about the lovely activities that other people did. There was that one where there was a film in the background, and they were using scripts from things. And it was so inspiring.

Peer Support and Encouragement

An unexpected result of the MOOC interactions was the degree to which peer support and encouragement was valued by participants, and how this prompted further engagement with the MOOC and the community. While this was evident throughout the MOOC, it was most clearly articulated in a videoconference held with MOOC participants at the end of the course. This feature of the MOOC seems to have had a large impact on the degree of participation in the MOOC and the quality of learning that came from the MOOC.

Examples

It 's so inspiring. That's why the course has been so interesting. Because you might not have an idea. And then you might not know what to do with something so seeing someone else use it effectively just makes you go 'OK, I'm going to try that.'

I really liked the opportunity to settle in because sometimes you are not really clear what a course is going to involve. Having a couple of

weeks to think and say and say this is what I am doing and this is what I like was quite reassuring because you need to get to know people when you are going to work alongside them. And being able to see other people sharing things that you recognise is good. And then them doing something different with something you think you know. Or they visited something that you abandoned. It just kind of pulled you in nicely through familiarity mixed nicely with new stuff. I really enjoyed that. (in response to question about starting the MOOC and Exploring Apps phase)

The course has been a veritable Teacher's Centre for me. Something I've missed since moving to an international context. I'm very impressed with the range of benefits and the way that the collaboration has worked. Meanwhile I've found new enthusiasms as a result of joining. Learning on your own has never been very successful for me before. I can sit down and do an assignment but it's always hard to get stuck in. With Teaching with tablets the fluid and flexible nature of this course has been a real transformation. Of course, this means that I've learned more about learning too. I'll be exploring how to take that to my colleagues and students. It's been really interesting to find a medium that feels truly 21st Century and about as far removed from the Victorian classroom setting as I can get.

Gains by Non-Social Learners

What we were unable to identify through this research project was the impact that the MOOC had on those that chose to "lurk" by engaging in the e-tivities by not participating in the community interactions. No lurker applied for a certificate at the end there was nothing to suggest that "lurking" actually prompted any action and participants transferring ideas into their own practice. We can deduce that it was the engagement with the community that made the experience more successful for those who were involved.

Conclusions and Further Work

We posed two research questions for this paper:

- Does participation in a hybrid MOOC prepare educators for using tablets more effectively in their classrooms?
- Is the hybrid MOOC format effective in influencing the teaching practices and pedagogical beliefs of those involved?

The first question was answered by analysis of the participants' responses. There was clear evidence of knowledge transfer, both from instructors to participants and peer-to-peer between participants. For example, the dialogue in figure 4 is a clear example of participants preparing to use tablets.

The participants in the TwT MOOC were having virtual discussions about real practice. The knowledge transfer was not so much in what they posted as in the discussions around the posts. It is not as simple as implementing the e-tivities, but much more complex as people learn from each other and knowledge transfer becomes closely linked to participants' roles within the developing community of practice.

The effect of the MOOC on teaching practices and pedagogical beliefs is harder to unambiguously identify. Answering the first research question simply requires looking at the artefacts created or referenced by participants during the MOOC. However, Kimble et al. (2001) suggest it is not the artefact per se which is important but the process involved in its creation. In the MOOC creating the artefacts appear to be catalyst for individual understanding and reflection, however the sharing of the artefacts appear to be the springboard for more learning. This was clear in some of the examples of conversations we found.

There are many other aspects of the MOOC interactions to explore, including more investigation into the transfer of learning into practice and reflections on that transfer. We will also investigate the development of a community of practice in the MOOC over the duration of the MOOC and beyond. One element we intend to explore is the notion of technology stewardship (Wenger, White, Smith, & Rowe, 2005), where the cultivation of an online community of practice is taken on by an individual or small group actively playing a facilitating role within the community. Some features of the interactions in TwT indicate that this role moved from instructors to learners over the course of the MOOC.

Another area to explore is the degree of participation in the social aspect of the course and the retention of students in the course. The MOOC had a small retention rate, with only 17% of people engaging with the MOOC in some way engaging with all the e-tivities and online community. We have not yet tracked individuals through their participation in the MOOC and compared it to their engagement online. Such an investigation could lead insights into what contributes to participants fully engaging (or not) in MOOCs.

We also intend to investigate the progression of learning in participants as they participated in the MOOC community. Wenger et al.'s framework (2005) suggests that participants work successively through a series of steps to achieve their goal. However, analysis of the interactions in the MOOC suggests that something more aligned with rhizomatic learning (Cormier, 2011) is taking place.

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